

REMARKS

This is intended as a full and complete response to the Final Office Action dated August 5, 2009 having a shortened statutory period for response set to expire on November 5, 2009. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1, 3-16, 39-40, 42-77 and 79-99 are pending in the application and remain pending following entry of this response. Applicants submit that any amendments made do not introduce new matter. Further, Applicants are not conceding in this application that any amended and/or canceled claims are not patentable over the art cited by the Examiner, as claim amendments and/or cancellations are only for facilitating expeditious prosecution of the claimed subject matter. Applicants respectfully reserve the right to pursue any pre-amended and/or canceled claims, and any other claims, in one or more continuing applications.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 3-11, 42-43 and 48-54 are rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by *Myles et al.* (U.S. Patent No. 6,879,579, hereinafter, “*Myles*”). Applicants respectfully traverse this rejection.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

In this case, *Myles* does not teach each and every element recited in the pending claims. For example, *Myles* fails to teach or suggest *two different types* of random access channels including *a first random access channel used by registered terminals* and *a second random*

access channel used by registered and unregistered terminals, as recited in claim 1.

As described in Figure 4 and paragraph [0038] of the present application, user terminals *that are registered* and can compensate for their round trip delays (RTD) may use a fast random access channel (F-RACH), while *both registered and unregistered* user terminals may use an S-RACH. *Myles* does not teach or suggest any type of random access channels for use by both registered and unregistered mobile stations.

In contrast, *Myles* teaches registration channels for use by unregistered terminals and data channels (Table 1A, row “chan_id”) for use by registered terminals. *Myles* also teaches that unregistered mobile stations cannot use data channels and must wait for a hub to issue a registration slot to register (Figure 11b, column 12 line 64 to column 13 line 3). *Myles* further teaches any (registered) mobile stations with queued data units can contend for access to a data channel with the empty state (column 11 lines 7-9). Neither registration channels nor data channels are usable by *both unregistered and registered mobile stations*.

As in the previous Office Action, the Examiner refers to a channel in the “empty-state” as corresponding to the “second random access channel used by either registered or unregistered terminals for system access” as recited in claim 1. Applicants respectfully submit, however, that a channel in the “empty-state” only allows use by *registered* terminals that have data queued and the empty-state is not applied to registration channels. In column 4, line 45 cited by the Examiner as teaching “any mobile station can have access” Applicants respectfully submit that, however, that this reference is to data channels only accessible by registered mobile stations. Mobile stations that are not registered, must first register using registration channels, as described in

... Unregistered mobile stations use a modified ALOHA protocol to deliver *registration requests* to the hub station. These requests include the station's unique MAC address, called the station-id. This is included in the registration confirmation response from the hub station to avoid ‘capture’ related problems

Unregistered stations do not use data channels and the teaching referred to by the Examiner is that a *data channel* in an empty state may be used by *any registered station*, but not by an unregistered station (which must first register).

For at least these reasons, Applicants submit claims 1, 3-11, 42-43 and 48-54 are allowable over the art of record and respectfully request withdrawal of this rejection.

Response to Arguments

In responding to Applicants' arguments submitted in response to the previous Office Action, the Examiner states that "Myles clearly discloses that registered terminals use one type of access channel (reserved or owner), while unregistered terminals use another type of access channel (empty). Applicants respectfully submit, however, that the Examiner has confused channel states with different channels. As described above, while any *registered* terminal may use *data channels* in an empty state, an unregistered terminal must register first, using a *registration channel*.

Claim Rejections - 35 U.S.C. § 103

Claim 12 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Myles* in view of *du Crest et al.* (U.S. Publication 2004/0047292, hereinafter, "*du Crest*"). Claim 13 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Myles* in view of *Caldwell et al.* (U.S. Publication No. 2002/0122393, hereinafter, "*Caldwell*"). Claims 14 and 44-47 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Myles* in view of *Fukuda* (U.S. Patent No. 6,956,813).

These claims depend, directly or indirectly from claim 1, which Applicants submit is allowable over the art of record for at least reasons discussed above. Accordingly, Applicants submit these claims are also allowable over the art of record and request withdrawal of this rejection.

Claims 15-16, 39-40, 55-58, 62-66, 68-69, 71-73, 79-83, 87-88, 90-92 and 97-99 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Chang et al.* (U.S. Patent

No. 6,532,225, hereinafter, "*Chang*") in view of *Ma et al.* (U.S. Patent No. 7,551,546, hereinafter, "*Ma*").

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. See MPEP § 2141. Establishing a *prima facie* case of obviousness begins with first resolving the factual inquiries of *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The factual inquiries are as follows:

- (A) determining the scope and content of the prior art;
- (B) ascertaining the differences between the claimed invention and the prior art;
- (C) resolving the level of ordinary skill in the art; and
- (D) considering any objective indicia of nonobviousness.

Once the *Graham* factual inquiries are resolved, the Examiner must determine whether the claimed invention would have been obvious to one of ordinary skill in the art.

Respectfully, Applicants submit that the Examiner has not properly characterized the teachings of the references and/or the claims at issue. Accordingly, a *prima facie* case of obviousness has not been established.

For example, the Examiner relies on *Chang* as teaching different types of channels with different message formats, but concedes that *Chang* fails to teach a MIMO system, as recited in claim 15. The Examiner, however, refers to *Ma* as teaching a MIMO system and concludes that it would have been obvious to one of ordinary skill in the art "to add MIMO communication system, such as suggested by *Ma*, in the system of *Chang*."

Applicants respectfully submit, however, that there is no motivation for this teaching and, even if combined, the resulting combination would fail to teach all the elements of the claims.

First off, neither *Ma* nor *Chang* teaches or suggests that there is any need to combine the teachings of the separate references. *Chang* does not describe any problem that might cause one to look to the teachings of *Ma* to utilize MIMO. Similarly, *Ma* does not describe any problem that might cause one to look to the teachings of *Chang* to utilize contention-based access.

As *Ma* is absolutely silent regarding contention-based access and does not use the term "contention" at all, even if the teachings were combined, the resultant combination would not result in first and second messages with different formats, via a MIMO transmission scheme, with the type of message selected depending on whether the terminal is registered or unregistered, as recited in claim 15.

For at least these reasons, Applicants submit claim 15 and its dependents are allowable over the art of record and request withdrawal of this rejection.

Claims 59-61, 74-77 and 93-96 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Chang* in view of *Ma*, and further in view of *Fukuda*. Claims 67, 84 and 86 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Chang* in view of *Ma*, and further in view of *Lee et al.* (U.S. Patent No. 7,453,844, hereinafter, "*Lee*"). Claims 70 and 89 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Chang* in view of *Ma*, and further in view of *du Crest*. Claim 85 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Chang* in view of *Ma*, and further in view of *Hunt* (U.S. Patent No. 6,868,079).

These claims depend, directly or indirectly from claim 15, which Applicants submit is allowable over the art of record for at least reasons discussed above. Accordingly, Applicants submit these claims are also allowable over the art of record and request withdrawal of this rejection.

Therefore, all of the claims of this application are believed to be allowable over the art of record, and allowance of the claims is respectfully requested.

CONCLUSION

Therefore, for at least the reasons presented above with respect to all of the pending claims subsequent to entry of this response, Applicants assert that all claims are patentably distinct from all of the art of record. All objections and rejections having been addressed, it is respectfully submitted that this application is in condition for allowance and a Notice to that

effect is earnestly solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Charge Statement: For this application, the Commissioner is hereby authorized to charge any required fees or credit any overpayment to Deposit Account 17-0026.

Respectfully submitted,
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